

REMARKS

Rejection of claims 1-20 under 35 U.S.C. 112, first paragraph

In Section 2 the Examiner has rejected claims 1-20 under 35 U.S.C. 112, first paragraph, for the reasons of record. The rejection is respectfully disagreed with, and is traversed below.

The document "ETSI SMG2 Tdoc 1048/99: "EGPRS Link Quality Control Measurements and Filtering", Ericsson, 20-24 September 1999", referred to on page 2, lines 5-21, of this patent application as prior art, describes an example of a running average exponential filter. A copy of this document was provided to the Examiner in the IDS filed on March 13, 2000.

In addition, reference is made in the application to the document "ETSI SMG2 Working Session on EDGE #11 Tdoc 2E99-501: "EGPRS LQC Measurements Filtering", Nokia, 18-22 October 1999", which describes an example of a "running average filter" as opposed to a "running average exponential filter". A copy of this publication was previously supplied by the applicants in the IDS filed on March 13, 2000. Tdoc 2E99-501 in Section 2 describes "filter length" as follows:

"The filter length is theoretically infinite. However, from some point, the weighting coefficients can be considered as negligible. Therefore the filter length can be considered as finite. This finite length should also be understood as the number of input data which is required to stabilize the filter output."

The concept of a "filter length" is thus one that is clearly known in the prior art, and one skilled in the art would clearly understand what is meant by a filter length.

The meaning of a "filter operation" should be obvious, in view of the description of the invention, i.e., it is the operation of the filter, or the filter in operation. Reference may be had, for example, to page 6, lines 2-11:

"The forgetting factor, in the preferred embodiment, directly influences the length of a filter (e.g., a running average filter) that operates on link quality measurement data. In an exemplary embodiment the running average filter operates on a sequence of measurements [of] link quality, such as a mean Bit Error Probability or a coefficient of variation of the Bit Error Probability (cv)(BEP). In other embodiments of this invention the filter length could be adjusted directly, or it could be changed by using some parameter other than the forgetting factor "a"."
(emphasis added)

At page 8, lines 22-26, the application states:

"For the purposes of this invention it is assumed the controller 14 is suitably programmed for obtaining the required measurement data, and for executing the measurement data filtering operations as described in further detail below."
(emphasis added)

The concept of a "filter operation" is thus also clearly set forth in the patent application, and one skilled in the art would have no difficulty in comprehending what was meant by the phrase "filter operation".

As to the "determined parameter", claim 1 explicitly states that this parameter is "indicative of a signal quality experienced by the MS". It is noted that there may be various parameters that are "indicative of a signal quality experienced by the MS". The dependent claims (e.g., claim 2) further define these parameters (e.g., one related to the speed of the MS).

Further by example, reference can be made to page 7, lines 13-22, where it is said:

"In order to enhance the ME-based filtering process, the inventors have thus provided a technique wherein the speed of the ME is taken into account when defining the filter parameter (the forgetting factor in this case). In general, the result is to change the length of the filter, and the forgetting factor "a" is, in this case, the means by which the filter length is changed. In other embodiments, the filter length could be adjusted directly, or it could be changed by using some parameter other than the forgetting factor "a"."
(emphasis added)

Reference with regard to calculations that relate to "filter length" and the "determined parameter" can be made, for example, to page 10, line 10, to page 11, line 1, and to page 12, line 16, to page 13, line 5.

The Examiner is respectfully requested to reconsider and remove the rejection of claims 1-20 under 35 U.S.C. 112, first paragraph.

Rejection of claims 1-20 under 35 U.S.C. 102(a)

Claims 1-20, including the previously allowed claims 6-10 and 19, were now also rejected under 35 U.S.C. 102(a) as being anticipated by the publication "EGPRS Link Quality Control Measurements and Filtering", ETSI SMG2 Working Session on EDGE, Tdoc SMG2 EDGE 444/99, Agenda item 6.3, October 18-22, 1999, Austin TX (source: Ericsson), hereafter referred to as "EDGE 444/99". A copy of this publication was previously supplied by the applicants in the IDS filed on March 13, 2000.

It is respectfully submitted that EDGE 444/99 does not disclose or suggest the subject matter claimed in claims 1-20.

It is respectfully submitted that the Examiner has not appreciated an essential difference between this invention and EDGE 444/99. This essential difference is clearly described in the specification, and is set forth in the claims 1-20.

As is stated in EDGE 444/99 at page 11, in Section 5:

"As widely used for other filtering purposes in GSM, a simple parameterised exponential filter could be used. The filter is characterized by its averaging period (or equivalently its forgetting factor). This parameter should be broadcast in the cell". (emphasis added)

In contradistinction to this cell-based approach, the instant patent application describes and

claims a technique that allows for mobile station-based filtering (averaging) of measurements, and not the cell-based approach of EDGE 444/99.

The applicants clearly recognized a problem that was not apparent to the authors of EDGE 444/99. For example, at page 4, lines 1-12, the applicants state:

"In summary, currently deployed or proposed systems use a fixed/non-fixed cell-based filter for each mobile equipment (ME) in the serving cell. However, these solutions are less than optimal for all of the MEs that may be present within the cell. That is, they are at most a compromise, as it is well known that different MEs within the same cell will encounter different channel conditions and fading effects, at least some of which can be directly linked to the velocity of the MEs. As it is most improbable that all MEs within a given serving cell will be moving with the same velocity, any cell-based filter that makes such an assumption is bound to provide less than optimal results." (emphasis added)

Not only have the applicants recognized this problem that arises from the cell-based filtering approach of the prior art, including the approach of EDGE 444/99, they have then gone on to describe and claim a solution to the problem.

Claim 1 recites in part that the method includes:

"determining a value of a parameter that indicative of a signal quality experienced by the ME; calculating in the ME an indication of link quality, the calculation employing a filtering operation having a filter length that is a function of the determined parameter; reporting the calculated indication of link quality to the wireless network". (emphasis added)

There is no express disclosure or suggestion of this subject matter in EDGE 444/99. In making the rejection of claim 1 the Examiner has simply referred to pages 1-15 of EDGE 444/99. However, it has been shown that at least Section 5 on page 11 of EDGE 444/99 actually teaches away from the subject matter of claim 1. If the Examiner believes otherwise, he is respectfully requested to point out exactly where EDGE 444/99 expressly discloses the subject matter recited

in claim 1.

Regarding claim 2, nowhere does EDGE 444/99 disclose: "deriving an indication of ME speed in the wireless network; and transmitting the speed indication to the ME".

The same arguments apply as well to the other rejected claims. For example, previously amended claims 6-10 each incorporate the subject matter of claim 1, and are thus clearly allowable for this reason alone. In addition, independent claim 17 refers in part to a:

"receiver in said ME for receiving said transmitted speed indication; and a processor in said ME for implementing a filter for filtering a sequence of link quality measurement data, said filter having a filter length that is a function of a parameter having a value that is a function of said received transmitted speed indication". (emphasis added)

Notwithstanding the comments of the Examiner, and his citation to pages 1-15 of EDGE 444/99, it is submitted for the reasons argued above that EDGE 444/99 does not expressly disclose or suggest at least the subject matter of the underlined text shown above, and thus cannot render claim 17 unpatentable. In that claim 17 is clearly patentable, then claim 18 is also clearly patentable.

Previously amended claim 19 incorporates the subject matter of claim 17, and is clearly patentable for this reason alone.

Claim 20 recites in part:

"determining in the wireless network an indication of a signal quality experienced by individual ones of the plurality of ME;

transmitting the determined indications to individual ones of the ME using a point-to-point message;

in a particular one of the plurality of ME, receiving the transmitted indication;

using the received indication for setting a length of a filter that is employed in a filtering operation that operates on a sequence of link quality measurement data".
(emphasis added)

For the reasons argued above, claim 20 is also clearly patentable over EDGE 444/99.

The Examiner is respectfully requested to reconsider and remove the rejections of claims 1-20 under 35 U.S.C. 102(a), and to allow all of these claims.

Respectfully submitted:



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